PIVOTING MIRROR WITH IMPROVED MAGNETIC DRIVE

ABSTRACT OF THE DISCLOSURE

A magnetic drive for providing pivotal motion to a functional surface, such as a mirror. The magnetic drive may be used to drive any torsional hinged device, but is particularly suitable for driving a torsional hinged mirror. According to a first embodiment, a dual axis functional surface uses a first pair of torsional hinges to provide primary movement to the functional surface and a second pair of torsional hinges provides movement orthogonal to the primary movement to allow positioning in two directions. The mass and movement of inertia of the functional surface is reduced by relocating permanent magnet sets to the axis of rotation. The reduced mass and movement of inertia results in a stiff robust hinge having a resonant frequency above about 120 Hz.